127. (New) Method according to claim 126, where the dsRNA is enclosed by micellar structures, preferably by liposomes.

128. (New) Method according to claim 126, where the dsRNA is enclosed by natural viral capsids or by chemically or enzymatically produced artificial capsids or structures derived therefrom.

129. (New) Method according to claim 126, where the target gene is expressed in eukaryotic cells.

130. (New) Method according to claim 126, where the target gene is selected from the following group: oncogene, cytokin gene, Id-protein gene, development gene, prion gene.

131. (New) Method according to claim 126, where the target gene is expressed in pathogenic organisms, preferably in plasmodia.

132. (New) Method according to claim 126, where the target gene is part of a virus or viroid.

133. (New) Method according to claim 132, where the virus is a virus or viroid which is pathogenic for humans.

134. (New) Method according to claim 132, where the virus or viroid is a virus or viroid which is pathogenic for animals or phytopathogenic.

135. (New) Method according to claim 126, where segments of the dsRNA are in double-stranded form.

136. (New) Method according to claim 126, where the ends of the dsRNA are modified in order to counteract degradation in the cell or dissociation into the single strands.

137. (New) Method according to claim 137, where the cohesion of the complementary region II, which is caused by the nucleotide pairs, is increased by at least one, preferably two, further chemical linkage(s).

138. (New) Method according to claim 137, where the chemical linkage is formed by a covalent or ionic bond, a hydrogen bond, hydrophobic interactions, preferably van-der-Waals or stacking interactions, or by metal-ion coordination.

139. (New) Method according to claim 137, where the chemical linkage is generated at at least one, preferably both, ends of the complementary region II.

140. (New) Method according to claim 137, where the chemical linkage is formed by means of one or more compound groups, the compound groups preferably being poly(oxyphosphinicooxy-1,3-propanediol) and/or polyethylene glycol chains.

141. (New) Method according to claim 137, where the chemical linkage is formed by purine analogs used in the complementary regions II in place of purines.

142. (New) Method according to claim 137, where the chemical linkage is formed by azabenzene units introduced into the complementary regions II.

143. (New) Method according to claim 137, where the chemical linkage is formed by branched nucleotide analogs used in the complementary regions II in place of nucleotides.

144. (New) Method according to claim 137, where at least one of the following groups is used for generating the chemical linkage: methylene blue; bifunctional groups, preferably bis(2-chloroethyl)amine; N-acetyl-N'-(p-glyoxylbenzoyl)cystamine; 4-thiouracil; psoralene.

145. (New) Method according to claim 137, where the chemical linkage is formed by thiophosphoryl groups provided at the ends of the double-stranded region.

146. (New) Method according to claim 137, where the chemical linkage at the ends of the double-stranded region is formed by triple-helix bonds.

147. (New) Method according to claim 126, where at least one 2'-hydroxyl group of the nucleotides of the dsRNA in the complementary region II is replaced by a chemical group, preferably a 2'-amino or a 2'-methyl group.

148. (New) Method according to claim 126, where at least one nucleotide in at least one strand of the complementary region II is a "locked nucleotide" with a sugar ring which is chemically modified, preferably by a 2'-O, 4'-C-methylene bridge.

149. (New) Method according to claim 126, where the dsRNA is bound to, associated with or surrounded by, at least one viral coat protein which originates from a virus, is derived therefrom or has been prepared synthetically.

150. (New) Method according to claim 149, where the coat protein is derived from polyomavirus.

151. (New) Method according to claim 149, where the coat protein contains the polyomavirus virus protein 1 (VP1) and/or virus protein 2 (VP2).

152. (New) Method according to claim 149, where, when a capsid or capsid-type structure is formed from the coat protein, one side faces the interior of the capsid or capsid-type structure.

153. (New) Method according to claim 126, where the dsRNA is complementary to the primary or processed RNA transcript of the target gene.

154. (New) Method according to claim 126, where the cell is a vertebrate cell or a human cell.

155. (New) Method according to claim 126, where at least two dsRNAs which differ from each other are introduced into the cell, where at least segments of one strand of each dsRNA are complementary to in each case one of at least two different target genes.

156. (New) Method according to claim 126, where one of the target genes is the PKR gene.

157. (New) Medicament with at least one oligoribonucleotide with double-stranded structure (dsRNA) which contains 15 to 49 base pairs for inhibiting the expression of a given target gene in mammalian cells, where one strand of the dsRNA has a region I with not more than 49 successive nucleotide pairs and which is at least in parts complementary to the target gene and where a complementary region II within the double-stranded structure is formed by two separate RNA single strands.

158. (New) Medicament according to claim 157, where the dsRNA is enclosed by micellar structures, preferably by liposomes.

159. (New) Medicament according to claim 157, where the dsRNA is enclosed by natural viral capsids or by chemically or enzymatically produced artificial capsids or structures derived therefrom.

160. (New) Medicament according to claim 157, where the target gene can be expressed in eukaryotic cells.

161. (New) Medicament according to claim 157, where the target gene is selected from the following group: oncogene, cytokin gene, Id-protein gene, development gene, prion gene.

162. (New) Medicament according to claim 157, where the target gene can be expressed in pathogenic organisms, preferably in plasmodia.

163. (New) Medicament according to claim 157, where the target gene is part of a virus or viroid.

164. (New) Medicament according to claim 163, where the virus is a virus or viroid which is pathogenic for humans.

165. (New) Medicament according to claim 163, where the virus or viroid is a virus or viroid which is pathogenic for animals or phytopathogenic.

166. (New) Medicament according to claim 157, where segments of the dsRNA are in double-stranded form.

167. (New) Medicament according to claim 157, where the ends of the dsRNA are modified in order to counteract degradation in the cell or dissociation into the single strands.

168. (New) Medicament according to claim 157, where the cohesion of the complementary region II, which is caused by the nucleotide pairs, is increased by at least one, preferably two, further chemical linkage(s).

169. (New) Medicament according to claim 168, where the chemical linkage is formed by a covalent or ionic bond, a hydrogen bond, hydrophobic interactions, preferably van-der-Waals or stacking interactions, or by metal-ion coordination.

170. (New) Medicament according to claim 168, where the chemical linkage is generated at at least one, preferably both, ends of the complementary region II.

171. (New) Medicament according to claim 168, where the chemical linkage is formed by means of one or more compound groups, the compound groups preferably being poly(oxyphosphinicooxy-1,3-propanediol) and/or polyethylene glycol chains.

172. (New) Medicament according to claim 168, where the chemical linkage is formed by purine analogs used in the complementary regions II in place of purines.

173. (New) Medicament according to claim 168, where the chemical linkage is formed by azabenzene units inserted into the complementary regions II.

174. (New) Medicament according to claim 168, where the chemical linkage is formed by branched nucleotide analogs used in the complementary regions II in place of nucleotides.

175. (New) Medicament according to claim 168, where at least one of the following groups is used for generating the chemical linkage: methylene blue; bifunctional groups, preferably bis(2-chloroethyl)amine; N-acetyl-N'-(p-glyoxylbenzoyl)cystamine; 4-thiouracil; psoralene.

176. (New) Medicament according to claim 168, where the chemical linkage is formed by thiophosphoryl groups provided at the ends of the double-stranded region.

177. (New) Medicament according to claim 168, where the chemical linkage are [sic] triple-helix bonds provided at the ends of the double-stranded region.

178. (New) Medicament according to claim 157, where at least one 2'-hydroxyl group of the nucleotides of the dsRNA in the complementary region II is replaced by a chemical group, preferably a 2'-amino or a 2'-methyl group.

179. (New) Medicament according to claim 157, where at least one nucleotide in at least one strand of the complementary region II is a "locked nucleotide" with a sugar ring which is chemically modified, preferably by a 2'-O, 4'-C-methylene bridge.

180. (New) Medicament according to claim 157, where the dsRNA is bound to, associated with or surrounded by, at least one viral coat protein which originates from a virus, is derived therefrom or has been prepared synthetically.

181. (New) Medicament according to claim 180, where the coat protein is derived from the polyomavirus.

182. (New) Medicament according to claim 180, where the coat protein contains the polyomavirus virus protein 1 (VP1) and/or virus protein 2 (VP2).

183. (New) Medicament according to claim 180, where, when a capsid or capsid-type structure is formed from the coat protein, one side faces the interior of the capsid or capsid-type structure.

184. (New) Medicament according to claim 157, where one strand of the dsRNA is complementary to the primary or processed RNA transcript of the target gene.

185. (New) Medicament according to claim 157, where the cell is a human cell.

186. (New) Medicament according to claim 157, where at least two dsRNAs which differ from each other are contained in the medicament, where at least segments of one strand of each dsRNA are complementary to in each case one of at least two different target genes.

187. (New) Medicament according to claim 186, where one of the target genes is the PKR gene.

188. (New) Use of an oligoribonucleotide with double-stranded structure (dsRNA) which has 15 to 49 base pairs for the preparation of a medicament for inhibiting the expression of a given target gene in mammalian cells, where one strand of the dsRNA has a region I with not more than 49 successive nucleotide pairs and which is at least in parts complementary to the target gene and where a complementary region II within the double-stranded structure is formed by two separate RNA single strands.

189. (New) Use according to claim 188, where the dsRNA is enclosed by micellar structures, preferably by liposomes.

190. (New) Use according to claim 188, where the dsRNA is enclosed by natural viral

capsids or by chemically or enzymatically produced artificial capsids or structures derived therefrom.

191. (New) Use according to claim 188, where the target gene can be expressed in eukaryotic cells.

192. (New) Use according to claim 188, where the target gene is selected from the following group: oncogene, cytokin gene, Id-protein gene, development gene, prion gene.

193. (New) Use according to claim 188, where the target gene can be expressed in pathogenic organisms, preferably in plasmodia.

194. (New) Use according to claim 188, where the target gene is part of a virus or viroid.

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195. (New) Use according to claim 194, where the virus is a virus or viroid which is pathogenic for humans.

196. (New) Use according to claim 194, where the virus or viroid is a virus or viroid which is pathogenic for animals or phytopathogenic.

197. (New) Use according to claim 188, where segments of the dsRNA are in double-stranded form.

198. (New) Use according to claim 188, where the ends of the dsRNA are modified in order to counteract degradation in the cell or dissociation into the single strands.

199. (New) Use according to claim 188, where the cohesion of the complementary region II, which is caused by the nucleotide pairs, is increased by at least one, preferably two, further chemical linkage(s).

200. (New) Use according to claim 199, where the chemical linkage is formed by a

covalent or ionic bond, a hydrogen bond, hydrophobic interactions, preferably van-der-Waals or stacking interactions, or by metal-ion coordination.

201. (New) Use according to claim 199, where the chemical linkage is generated at at least one, preferably both, ends of the complementary region II.

202. (New) Use according to claim 199, where the chemical linkage is formed by means of one or more compound groups, the compound groups preferably being poly(oxyphosphinicooxy-1,3-propanediol) and/or polyethylene glycol chains.

203. (New) Use according to claim 199, where the chemical linkage is formed by purine analogs used in the complementary regions II in place of purines.

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204. (New) Use according to claim 199, where the chemical linkage is formed by azabenzene units introduced into the complementary regions II.

205. (New) Use according to claim 199, where the chemical linkage is formed by branched nucleotide analogs used in the complementary regions II in place of nucleotides.

206. (New) Use according to claim 199, where at least one of the following groups is used for generating the chemical linkage: methylene blue; bifunctional groups, preferably bis(2-chloroethyl)amine; N-acetyl-N'-(p-glyoxylbenzoyl)cystamine; 4-thiouracil; psoralene.

207. (New) Use according to claim 199, where the chemical linkage is formed by thiophosphoryl groups attached to the ends of the double-stranded region.

208. (New) Use according to claim 199, where the chemical linkage at the ends of the double-stranded region is formed by triple-helix bonds.

209. (New) Use according to claim 188, where at least one 2'-hydroxyl group of the nucleotides of the dsRNA in the double-stranded structure is replaced by a chemical

group, preferably a 2'-amino or a 2'-methyl group.

210. (New) Use according to claim 188, where at least one nucleotide in at least one strand of the complementary region II is a "locked nucleotide" with a sugar ring which is chemically modified, preferably by a 2'-O, 4'-C-methylene bridge.

211. (New) Use according to claim 188, where the dsRNA is bound to, associated with or surrounded by, at least one viral coat protein which originates from a virus, is derived therefrom or has been prepared synthetically.

212. (New) Use according to claim 211, where the coat protein is derived from polyomavirus.

213. (New) Use according to claim 211, where the coat protein contains the polyomavirus virus protein 1 (VP1) and/or virus protein 2 (VP2).

214. (New) Use according to claim 211, where, when a capsid or capsid-type structure is formed from the coat protein, one side faces the interior of the capsid or capsid-type structure.

215. (New) Use according to claim 188, where one strand of the dsRNA is complementary to the primary or processed RNA transcript of the target gene.

216. (New) Use according to claim 188, where the cell is a human cell.

217. (New) Use according to claim 188, where at least two dsRNAs which differ from each other are used, where at least segments of one strand of each dsRNA are complementary to in each case one of at least two different target genes.

218. (New) Use according to claim 217, where one of the target genes is the PKR gene.

219. (New) Use according to claim 188, where the medicament is injectable into the